KetaSpire® KT-880 CF40

polyetheretherketone

KetaSpire® KT-880 CF40 is a 40% chopped carbon fiber-reinforced polyetheretherketone (PEEK.) The carbon fiber content in the formulation is designed to provide maximum strength and stiffness properties in a filled PEEK compound. The resin enjoys all the key performance attributes for which PEEK is known including resistance to harsh chemical environments, high heat resistance (both short and long term), along with excellent fatigue resistance.

This resin is a high flowing/low viscosity grade and is ideally suited for use in injection molding fabrication. It can be melt processed using standard thermoplastic melt processing equipment.

Potential application areas for KT-880 CF40 include uses in the aerospace industry and some other transportation applications where maximum mechanical properties are desired while maintaining a low specific gravity. Semiconductor fabrication is another industrial area of possible use for this resin as are the chemical processing, oil and gas, and health care industries.

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Carbon Fiber, 40% Filler by Weight	
Features	• Autoclave Sterilizable • Chemical Resistant • E-beam Sterilizable • Ethylene Oxide Sterilizable • Fatigue Resistant • Flame Retardant • Good Dimensional Stability • Good Sterilizability • Heat Sterilizable	• High Flow • High Heat Resistance • High Stiffness • High Strength • Radiation (Gamma) Resistant • Radiation Sterilizable • Radiotranslucent • Steam Resistant • Steam Sterilizable
Uses	• Aircraft Applications • Connectors • Dental Applications • Electrical/Electronic Applications • Film • Hospital Goods • Industrial Applications	• Medical Devices • Medical/Healthcare Applications • Oil/Gas Applications • Pump Parts • Seals • Surgical Instruments
RoHS Compliance	• Contact Manufacturer	
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding • Machining	• Profile Extrusion

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.46		ASTM D792

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	33000	MPa	ASTM D638
Tensile Strength	258	MPa	ASTM D638
Tensile Elongation [1] (Break)	1.6	%	ASTM D638

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Mechanical	Typical Value	Unit	Test method
Flexural Modulus	30000	MPa	ASTM D790
Flexural Strength	386	MPa	ASTM D790
Flexural Elongation (Break)	1.8	%	ASTM D790

Impact	Typical Value	Unit	Test method
Notched Izod Impact	80	J/m	ASTM D256
Unnotched Izod Impact	750	J/m	ASTM D4812

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed	332	°C	

Fill Analysis	Typical Value	Unit	Test method
Melt Viscosity (400°C, 1000 sec^-1)	490	Pa·s	ASTM D3835

Injection	Typical Value	Unit
Drying Temperature	150	°C
Drying Time	4.0	hr
Rear Temperature	365	°C
Middle Temperature	370	°C
Front Temperature	375	°C
Nozzle Temperature	380	°C
Mold Temperature	175 to 205	°C
Injection Rate	Fast	
Screw Compression Ratio	2.5:1.0 to 3.5:1.0	

Notes

Typical properties: these are not to be construed as specifications.

[1] 5.0 mm/min

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